

Notice of Allowability

Application No.

10/526,204

Examiner

Edward Tolan

Applicant(s)

DERICHS, HEINRICH-WILHEIM

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-5.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

ED TOLAN
PRIMARY EXAMINER




REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: The prior art of record does not disclose, in a deep rolling head having a housing for supporting two roller cages containing a rolling tool, the housing having at the two ends of the face a projection for the support of the roller cages wherein a fastening and guiding element is provided for the roller cages which engages inside each roller cage and is attached to the projections of the housing.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication should be directed to Ed Tolan whose telephone number is 571-272-4525.

ED TOLAN
PRIMARY EXAMINER


DEEP ROLLING ROLLER HEAD OF A DEEP ROLLING TOOL

9-1906 *cf* This application is a 35 USC 371 of PCT/EP 03/01531, filed 02/15/2003.

The invention relates to a deep rolling roller head of a deep rolling tool for deep rolling radii or recesses on the main and lifting bearing journals of crankshafts with a housing in which one or two deep rolling rollers are rotationally guided in a loose manner and with little play respectively in two roller cages at a lateral distance from each other equal to the axial width of the corresponding bearing journal and the roller cages are fastened to supports on the face of the housing oriented toward the crankshaft supporting the roller cages respectively on their faces away from the deep rolling rollers and at the same time move them laterally.

Deep rolling roller heads of this type are known e.g. from the following printed documents;

1. EP 0 661 137 B1, Fig. 6,
2. EP 0 683 012 B1, Fig. 4,
3. EP 0 839 607 A1, Fig. 1,
4. US 5,575,167, Fig. 7 and
5. US 5,806,184, Fig. 2a

The known deep roller heads have in common that the roller cages are attached on the housing of the deep roller head by means of L-shaped supports. The roller cages can be brought into a predetermined position by means of the supports and can be fixed on the deep rolling roller head. The roller cages are rotationally guided in a loose manner with little play. This play amounts in general to approximately 0.2 mm. In addition, the deep rolling rollers are offset by approximately 0.2 mm relative to the center of the housing of the deep rolling roller head around which a guide roller of the deep rolling rollers rotates. In addition the deep rolling rollers in the deep rolling roller head are spread out in axial direction.